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ABSTRACT

This study, conducted for the Maryland legislature, evaluated the current method for financing graduate medical education in hospital rates, particularly whether the costs of graduate education at the state's two academic medical centers are too high. The study involved discussions with the Health Services Cost Review Commission (HSCRC), monitoring briefings to and deliberations of the HSCRC Advisory Committee on Graduate Medical Education, meetings with stakeholders, and a literature review. The study found that direct costs for residents at the two academic medical centers rose by almost 70 percent between 1989 and 1994; that health care delivery trends are away from inpatient care though medical training has not yet shifted to non-hospital settings; and that the nation and Maryland in particular has an oversupply of physicians but an undersupply of general practitioners. The HSCRC has considered seven alternative funding strategies, and the Advisory Committee has made three recommendations for change. This study concluded, however, that the current financing system is preferable to any of the proposed alternatives; that if the state should intervene to meet physician workforce goals, the all-payer system might provide a source for financial incentives; and that training and financing should move toward ambulatory care settings. (JB)

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FINANCING OF GRADUATE MEDICAL EDUCATION

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Department of Fiscal Services
90 State Circle
Annapolis, Maryland 21401

Baltimore area 410-841-3710 Washington area 301-858-3710
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FINANCING OF GRADUATE MEDICAL EDUCATION

Introduction

SB 639 requires the Department of Fiscal Services, in consultation with the Health Services Cost Review Commission, to "assess the current method for financing graduate medical education in hospital rates and make recommendations by December 1, 1995 to the Senate Finance Committee and the House Environmental Matters Committee regarding a plan to distribute equitably the reasonable costs of graduate medical education."

Alternative methods of financing graduate medical education concern Maryland's teaching hospitals, particularly the two academic medical centers, which believe that the costs of graduate medical education make teaching hospitals unattractive in an increasingly price competitive hospital marketplace.

Fiscal Services' study involved:

- Discussions with Health Services Cost Review Commission (HSCRC) staff
- Monitoring briefings to and deliberations of the HSCRC Advisory Committee on Graduate Medical Education
- Meetings with stakeholders
- Literature review

Background

Graduate medical education (GME) is the training of medical interns and residents who have completed a medical degree program. Teaching hospitals, including but not limited to the state's two academic medical centers, provide graduate medical education programs. Programs are accredited by a national accreditation body, the Accreditation Council for Graduate Medical Education. The Council is comprised of the American Medical Association, the American College of Physicians, and the American Association of Medical Colleges. Programs may receive a one to five-year accreditation.

Hospitals must report the number of full-time equivalent (FTE) residents to the Health Services Cost Review Commission each year. The number of FTE residents reported grew from 1,393.7 in FY 1989 to 1,511.4 in FY 1994 - an 8.45% increase. Of these 1,511.4 FTE residents, 50% were located at the academic medical centers - University and Johns Hopkins (see Exhibit 1).

EXHIBIT 1

GRADUATE MEDICAL EDUCATION FACTS 1989 vs. 1994

Graduate Medical Education Reported FTEs

Hospital	FY 1989	FY 1994	Growth Rate 89 to 94
University	250.2	282.2	12.79%
P.G. General	64.7	48.9	-24.42%
Holy Cross	29.1	29.1	0.00%
Mercy	46.3	55.2	19.22%
Johns Hopkins	384	479	24.74%
St. Agnes	95.2	54.2	-43.07%
Sinai	104.7	105.9	1.15%
Franklin Square	80.6	76	-5.71%
Suburban	2.7	3.1	14.81%
Union Memorial	59.6	62	4.03%
Hopkins Bayview	87.5	100.2	14.51%
Childrens	5	8	60.00%
Harbor	48.7	47.2	-3.08%
Maryland General	48.4	45.5	-5.99%
GBMC	50	58.1	16.20%
Liberty	4.6	3.8	-17.39%
Kernan	2.2	5	127.27%
Good Samaritan	30.2	48	58.94%
Statewide	1393.7	1511.4	8.45%

Source: Health Services Cost Review Commission

Financing of Graduate Medical Education

Financing in Maryland, as in other states, is largely through hospital rates. Maryland's all-payer system includes an amount in rates for graduate medical education. The cost of GME is divided into two components: direct medical education (DME) and indirect medical education (IME). Direct medical education costs consist of the salaries and fringe benefits of residents and interns, faculty supervisory expenses and allocated overhead. Hospitals report DME costs periodically to the Commission, according to HSCRC instructions. IME expenses are generally described as additional costs incurred as a result of teaching functions. Examples of IME costs include ancillary services resulting from extra tests ordered by residents, staff and supplies from a more intense case mix, and new technology to support research activities. IME costs are not reported but have been estimated by the Commission through a regression analysis.

In FY 1994, total DME costs were $78.9 million, a 50% increase from FY 1989. DME costs at the two academic medical centers rose by almost 70% during this period. Total IME was estimated at $95.2 million in FY 1994.[1] Combining the two figures, the average cost per FTE resident was $115,159.

The cost of GME is borne by payers of hospital services. Payment source breaks down as follows:

- Medicare 35.3%
- Medicaid 22.5%
- Blue Cross 14.2%
- Commercial, HMO, Other 28.0%

The state supports graduate medical education both directly and indirectly through its operating and capital budgets. Medicaid payments for GME were approximately $39 million in fiscal year 1994. Half of this amount was state general funds. In fiscal year 1996, the state provided $15.0 million in capital budget support to the University of Maryland Medical System. State support for the University of Maryland Medical School was approximately $38 million. Through state aid to independent colleges and universities, Johns Hopkins' Medical School received $1.5 million. Johns Hopkins Health System received $4.0 million in general obligation bonds for its new Oncology Center. The state also provided approximately $350,000 in scholarships and loan repayments to medical students and residents.

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[1] The Health Services Cost Review Commission uses the Indirect Medical Education estimate only in interhospital comparisons. The commission cautions against interpreting the estimate as the actual cost of Indirect Medical Education. It is used here only to provide an overall sense of the cost of graduate medical education in Maryland.

The total cost of graduate medical education is approximately 4.1% of hospital net operating revenue. GME cost as a percentage of revenue varies by hospital. Exhibit 2 compares hospital direct medical education expenses as a percentage of net patient revenue. The percentage varies from .2% at Suburban to 6.48% at University.

Academic medical centers, with the highest hospital rates in the state, argue that GME cost makes them less price competitive. Other hospitals, including some teaching hospitals, respond that GME also confers certain benefits on teaching hospitals which may not be explicit in their rates. One argument is that medical residents provide a source of "cheap labor" for house coverage on evenings and weekends. Non-teaching hospitals must pay more expensive physicians for this coverage. No data is available to support either side of the argument.

The HSCRC examined market share trends for academic medical centers and other teaching hospitals to determine whether they are becoming less competitive. The HSCRC looked at the hospitals' share of discharges in the central Maryland region over a seven-year period coinciding with growth in managed care. As shown in Exhibit 3, neither the academic medical centers nor the other teaching hospitals have lost market share, even among more price competitive commercial insurers, Blue Cross or HMOs, over the period.

EXHIBIT 3

MARKET SHARE TRENDS FOR ACADEMIC MEDICAL CENTERS AND OTHER TEACHING HOSPITALS: 1988-1994

	AMCs		Teaching Hospitals	
Year	All Payers	Comm + BC+ HMO Payers	All Payers	Comm + BC + HMO Payers
1988	16.87%	11.28%	51.15%	52.41%
1989	17.55%	12.47%	50.19%	48.26%
1990	18.96%	13.78%	49.27%	49.87%
1991	17.35%	12.71%	51.55%	49.56%
1992	17.98%	11.64%	51.15%	49.72%
1993	18.50%	11.65%	50.52%	49.60%
1994	18.69%	12.44%	50.04%	48.72%

Source: Health Services Cost Review Commission

EXHIBIT 2

MARYLAND GME DIRECT EXPENSES AS A PERCENTAGE OF NET PATIENT REVENUE FY 1994

Hospital	Direct Expenses	Net Patient Revenue	Direct Expense as % of Net Patient Revenue
University	$16,138,400	$249,003,500	6.48%
P G. General	$3,004,600	$124,360,300	2.42%
Holy Cross	$1,796,900	$134,722,300	1.33%
Mercy	$4,032,300	$98,491,000	4.09%
Johns Hopkins	$18,348,000	$391,312,400	4.69%
St. Agnes	$3,104,000	$140,641,000	2.21%
Sinai	$6,406,500	$179,826,200	3.56%
Franklin Square	$3,775,700	$135,022,500	2.80%
Suburban	$176,600	$87,490,500	0.20%
Union Memorial	$3,762,100	$126,202,600	2.98%
Hopkins Bayview	$6,257,200	$117,547,800	5.32%
Childrens	$529,100	$14,044,400	3.77%
Harbor	$2,282,400	$84,166,800	2.71%
Maryland General	$2,380,200	$79,955,700	2.98%
GBMC	$4,568,900	$152,880,500	2.99%
Liberty	$122,100	$55,711,000	0.22%
Kernan	$275,100	$18,686,900	1.47%
Good Samaritan	$1,918,900	$94,883,900	2.02%
Statewide	$78,879,000	$2,284,949,300	3.45%

Source: Health Services Cost Review Commission

Health Care Delivery Trends

Health care is shifting away from inpatient care. In Maryland, medical-surgical patient days among the population ages 15 - 64 declined from 2.1 million in 1980 to 1.1 million in 1994. The average length of stay for this group declined from 7.68 to 4.81 days over the same period. The hospital share of national health expenditures is expected to decline from 36.9% in 1993 to 33.9% in 2005, according to a recent article in Health Care Financing Review.

Despite the shift in health care delivery, physician training is only beginning to shift to non-hospital settings. The University of Maryland Medical Center reports discouraging results from efforts to interest HMOs and other ambulatory settings in serving as practice sites. The UM Medical Center operates a clinic in West Baltimore and an area health education center in Cumberland. These sites provide limited training opportunities for resident physicians outside the hospital setting. A second area health education center will open in Cambridge, to provide exposure to rural practice settings. Johns Hopkins Hospital residents work in East Baltimore health clinics staffed by the Hopkins Medical Services Corporation as well as school-based health clinics in Baltimore.

The U.S. is viewed as having too many physicians, especially specialists. The Pew Health Professions Commission released a report in October 1995 estimating a physician surplus as high as 20%. According to Dr. Jonathan Weiner, a professor at the Johns Hopkins School of Public Health, by the year 2000, the U.S. will have 42% too many physicians and 67% too many specialists. Primary care will be in relative balance. The national Council on Graduate Medical Education recommended in 1993 that the nation move toward a system in which 50% of all physicians practice in the disciplines of family medicine, general internal medicine, and general pediatrics.

Maryland has a greater physician oversupply than the U.S. as a whole, according to Dr. Weiner. Moreover, a report from the Intergovernmental Health Policy Project at George Washington University discloses that Maryland ranks last among the states in the percentage of medical school graduates completing a residency in 1995 who plan to enter primary care (20%).

Many states have examined health workforce issues, to determine the appropriate type and number of practitioners, promote access to care, and develop funding mechanisms. New York has a permanent Council on Graduate Medical Education. A 1994 report by the Intergovernmental Health Policy Project, "State Efforts to Increase Community-Based Medical Education", discussed efforts underway in several states to "right size" the physician workforce. The report also recommended strategies for states seeking to train more generalist physicians. Many strategies involve leveraging the state's financial support for medical education and graduate medical education.

Problems and Alternative Solutions

In short, problems with the current financing structure in Maryland are similar to those across the country. The structure:

- Is almost entirely directed at hospital care, even though most health care is delivered in non-hospital settings;
- Places a heavy burden on Medicaid, because the academic medical centers have a disproportionate number of Medicaid patients;
- May provide a financial disincentive to send patients to teaching hospitals, if payers perceive GME costs to outweigh benefits of teaching;
- Provides no incentive to train an appropriate number and specialty mix of physicians.

To address these problems, other possible financing methods have been considered by the HSCRC Advisory Committee and others:

- Pooling of costs among hospitals or some broader health care sphere has been discussed as a more equitable method of financing. The absence of good data on GME costs and benefits and the lack of evidence that GME has impaired hospital competitiveness in Maryland remove much support for this alternative.
- An insurance premium tax would theoretically broaden the payment base for GME, but the state would be unable to impose the tax on self-insured entities, Medicare, and most likely Medicaid.
- A provider tax would shift financing to those who benefit directly from graduate medical education - the recipients - but would require breaking out the teaching cost of GME, which arguably benefits primarily the student, from the patient care cost, which benefits the patient. Such a tax would also be unpopular and difficult to impose fairly.
- A direct state subsidy would place the financing burden on all those who benefit from GME - the taxpayer citizens of the state - but the state would lose the federal Medicare and Medicaid subsidies for GME, worth tens of millions of dollars.
- Vouchers would give the state more control over the number of generalist and specialist physicians being trained, but would set Maryland apart from all other states in recruiting medical residents, possibly causing talented medical graduates to look elsewhere.

- Quotas would also give the state more control over the composition of medical residents. Because the teaching hospitals are private institutions, there would be great resistance to quotas. The state would likely need to develop financial incentives for hospitals to buy into quotas - a difficult prospect in times of fiscal austerity. The state would also need clear goals as to the composition of the physician workforce and better knowledge as to the impact of GME on the workforce.

- GME funds could be redirected toward services the state considers most desirable, such as primary care and preventive services. Tennessee did this in creating its Medicaid managed care ("Tenncare") program. This would force many GME programs to close, creating great turmoil, at least in the transition years.

Comments on HSCRC Advisory Committee on GME Recommendations

The Advisory Committee on Graduate Medical Education recommends establishing a Physician Graduate Medical Education and Workforce Policy Committee to determine Maryland's future need for physicians and create a state plan to influence the number, specialty mix, and distribution of physicians throughout the state. While creation of such a committee could develop information on Maryland's physician workforce needs and is consistent with efforts in other states, another viewpoint holds that such state intervention may not be necessary.

Market forces could, over time, bring about an appropriate number and type of physicians. Maryland has the third-highest HMO penetration among the states - 35%. This percentage is likely to grow as Medicaid moves to mandatory managed care and as federal Medicare reductions and incentives compel more elderly individuals to choose an HMO or some other form of managed care. HMOs have a much higher generalist to specialist physician ratio than is found in a fee-for-service environment. Their unwillingness to pay for unnecessary specialist care could bring about the change that the GME Advisory Committee and others seek.

Teaching hospitals determine the number and type of residents they need according to patient care needs and utilization patterns. If the state's need for hospital beds declines, as the Health Resources Planning Commission projects, the need for residents will also decline. As hospitals become more active in managed care, through community health networks, they will need to develop a physician workforce more attractive to, or in competition with, HMOs. They can do this either by increasing use of generalist physicians or by using specialists for primary care. Either way, the balance could gradually tip toward primary care, with no extraordinary intervention by the state.

Other reasons downplaying the need for a physician workforce policy committee:

- The state's ability to influence that workforce may be limited, given that 63% of physicians who practice in Maryland trained elsewhere.

- Other states employing such a committee have often recommended financial incentives to encourage primary care, particularly in medically underserved areas. Maryland is facing a period of fiscal austerity, when its ability to create such incentives is limited.

- The state's academic medical centers, particularly Hopkins, have a mission which extends beyond Maryland's physician workforce needs. While their residents may go elsewhere to practice or may devote time to specialized research, those institutions provide other significant benefits, including economic benefits, to the state.

- Researchers have pointed out how long it takes to influence the composition of the physician workforce. Roughly 500 residents complete their program in Maryland each year, compared to 20,736 licensed physicians.

The Advisory Committee on GME also recommends that the HSCRC use information on quality of residency programs in reviewing hospital rates and altering hospital funding mechanisms. While quality is important, it is questionable whether this is an appropriate mission for the HSCRC. There is a private accrediting body for residency programs, whose reviews are not made public. The Joint Committee on Accreditation of Health Care Organizations and the Office of Licensing and Certification implicitly consider quality of residency programs when they review hospital quality of care. The HSCRC has minimal expertise on quality issues and does not examine quality in any other aspect of hospital care when setting hospital rates or revising funding mechanisms.

If there are questions about the quality of hospital residency programs, the Accreditation Council for Graduate Medical Education and the Residency Review Committees for each specialty should be pressed to make their findings public and to raise their standards.

The third and final Advisory Committee recommendations is to continue the current financing method for GME until better information on GME costs and benefits and physician workforce needs becomes available. DFS agrees with this recommendation and encourages state monitoring of workforce and health care trends. Three state health commissions share responsibility in these areas; the General Assembly could request periodic reports.

Conclusions and Recommendations

In the absence of clearcut signs that teaching hospitals are suffering and of good information on the costs and benefits of graduate medical education, the current financing system is preferable to any of the alternatives discussed above. Should the state determine that intervention is necessary to meet physician workforce goals, the all-payer system might provide a source for financial incentives. Ideally, both graduate medical education training and financing would move toward ambulatory care settings, where most health care is delivered.